

eating as a clinical eating disorder, and not including individuals who inadvertently failed to match energy expenditure with adequate energy intake as the ACSM triad position stand does. Additionally, by failing to diagnose menstrual disturbances by hormone assays and relying instead on self-report, Torstveit and Sundgot-Borgen grossly underestimated the incidence of menstrual disturbances.<sup>18</sup> Furthermore, the prevalence of the simultaneous occurrence of all three components of the triad was undoubtedly biased low in their athletes by their inclusion of "technical" sports that constituted 13 of 66 sports examined. These sports included bowling, curling, billiards, sailing, shooting, sky diving and motorcycle riding. Athletes in these sports, which do not emphasise leanness or aesthetic characteristics, are unlikely to experience triad-related disorders. Meanwhile, the prevalence of all three components in the control group was biased high by their definition of "athletes" as members of national sports teams and "controls" as everyone else, regardless of their activity level. Furthermore, as a result of their failure to differentially diagnose amenorrhoea, four of five controls deemed to have all three components of the triad had body fat percentages >30%, likely indicating pathology related to obesity, and thus an aetiological mechanism different from the undernutrition that underlies the triad. Consideration of the latter point warrants a re-calculation of the prevalence of the simultaneous occurrence of all three components of the triad in the control group as 1/145 or 0.06%, which is about 100-fold lower than that in the athletes from leanness sports (6.6%) in their study.

DiPietro and Stachenfeld suggest that "energy availability does not always seem to be a mechanism" involved in changes in reproductive function among athletes. Citing our own papers,<sup>18</sup> they state that "energy intake was greater in cyclic, ovulating women with menstrual dysfunction than in their sedentary counterparts (suggesting appropriate energy balance and energy availability in these active women)". There are several errors in this statement. Numerous publications clearly establish that exercising women consume more calories than their sedentary counterparts.<sup>19</sup> Thus, it is not surprising that the exercising women in our study consumed more calories than the sedentary women, and it does not imply that our exercising women were in "appropriate energy balance or energy availability" as DiPietro and Stachenfeld state. Indeed, DiPietro and Stachenfeld misrepresent our data by stating that "only anovulatory women in this study had significantly attenuated energy availability". In fact, table 7 of our paper<sup>18</sup> clearly reports that energy availability in all groups of exercising women with varying degrees of menstrual defects was significantly lower than in the sedentary women. Among our subjects,<sup>18</sup> only 21% of the exercising women had ovulatory cycles, whereas the remaining 79% had menstrual disturbances that were clearly linked<sup>20,21</sup> to a disrupted metabolic environment that is characteristic of energy deficiency. Of course, it is no surprise that not all menstrual disturbances in athletes are caused by energy deficiency. Some exercising women, just like some non-exercising women, are subject to endocrinopathies, such as polycystic ovary syndrome, that are extraneous to sports participation. The diagnosis of exercise-related menstrual disturbances must exclude these other pathologies. When proper

diagnostic procedures confirm the existence of exercise-related menstrual disturbances, a significant relationship with energy deficiency is consistently found in both cross-sectional and prospective studies.<sup>20,22,23</sup>

In conclusion, the claims made by DiPietro and Stachenfeld show serious deficits in their understanding of the triad and research related to it. They also show a totally unjustified anxiety about the thoughtful and responsible efforts of ACSM to protect and improve the health and safety, and thereby to promote the increasing participation, of women and girls in sport.

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## BOOK REVIEW

### Human rights in youth sport

Edited by P David. London: Published by Routledge, 2005, £70.00 (soft cover), pp 338. ISBN 0415305594

It may not be apparent unless one works in the field, but abuse of athletic children in the name of their sports is relatively widespread, even in so-called civilised societies. It includes the imposition of training regimes suited for adult athletes, punishment, encouraging the development of eating disorders and doping, psychological, sexual and emotional abuse from parents and coaches (who should be the protectors of the child athlete), and other competitors (who might be subjected to the same abuse). It culminates in trafficking and sale of young athletes, and in systematic violation of educational agreements and basic family rights of these children. All this despite the precise statements made by the United Nations Convention on the Rights of the Child. Unfortunately, there are few reliable data on this topic, and Paulo David estimates that, of all children involved in competitive sports, 10% have undergone human rights abuse, and another 20% are at risk.

The author makes the point that self-monitoring in sports is practically non-existent: sport is considered to be a private activity, and it has been recognised only in the past few years that young athletes have special requirements. Also, child labour and exploitation laws do not apply to sports.

The United Nations Convention on the Rights of the Child was not conceived to apply to competitive children's sports, but it is scary to see how essentially all of its articles can and have been circumvented in the name of elite youth sports achievements. It is evident that the education of young elite athletes has to be put on the shelf, possibly never to be taken up again, if a young athlete trains twice a day for up to 30 h

a week. The pressure to perform may become too much, and some children may fail at both education and sport. They become double casualties, leaving school at an early age and unable to earn their living through sport (p 181).

I knew about the "baseball factories" of Latin America, but the extent of the problem was not clear. I shall look at baseball with a different eye from now on!

This book mainly deals with elite and American university-based sports, but the principles also apply to school sports. "Whatever is done should be in the best interests of the child or youth" is the principle that should be foremost in every coach's mind.

*Human rights in youth sports* is written in a serious but not heavy style, and makes enthralling reading. There is an extensive bibliography, in which I could not avoid noticing that my own surname had been misspelt!

### Rating

• Presentation	11/20
• Comprehensiveness	17/20
• Readability	18/20
• Relevance	20/20
• Evidence basis	12/20
• Total	78/100

Nicola Maffulli

## CALENDAR OF EVENTS

### ACSP Clinical Sports: Upper Limb

3–4 March 2007, Sydney, Australia

Further details: [www.acsp.org.au](http://www.acsp.org.au)

### 3rd International meeting on minor traumatic brain injuries in sports

12–17 March 2007, Samedan/St Moritz, Switzerland

Further details: Website: [www.orthopaedie-samedan.ch/mtbi.html](http://www.orthopaedie-samedan.ch/mtbi.html)

### III International Congress: People, Sport and Health

19–21 April 2007, Saint-Petersburg, Russia

The congress will be carried out under the auspices of the Secretary General of the Council of Europe, under the patronage of the European Union and the International Olympic Committee at cooperation with governmental, scientific and leading social organisations.

Further details: Email: [sport-health@home.ru](mailto:sport-health@home.ru); Website: [sport-health.ru](http://sport-health.ru)

### 17th Annual Meeting of the International Association for Dance Medicine & Science (IADMS)

25–29 October 2007, Canberra and Melbourne, Australia

Co-hosted by three of Australia's elite institutions—The Australian Ballet School, Australian Dance Council (Ausdance) and the Australian Sports Commission—IADMS works to improve dancers' health, well being and performance through the encouragement and promotion of dance medicine and science. Outstanding international researchers, practitioners and educators will offer insight into the latest developments in dance medicine and science. Activities of relevance to dancers, dance teachers and health professionals will include presentations and movement sessions on topics such as:

- Training efficiency
- Nutrition
- Dance wellness programmes

- Psychology
- Scientific research
- Practitioner wisdom
- Injury prevention, treatment and rehabilitation
- Surgical and non-surgical interventions

Further details: Email: [janetkarin@australianballetschool.com.au](mailto:janetkarin@australianballetschool.com.au)

For information about other IADMS conferences and publications contact Conference Director [rector@iadms.org](mailto:rector@iadms.org) or [www.iadms.org](http://www.iadms.org).

### 6th Interdisciplinary World Congress on Low Back & Pelvic Pain

7–10 November 2007, Barcelona, Spain

This global congress invites practitioners, academics, researchers and policy makers from all continents and from clinical areas as wide ranging as medicine, physiotherapy, chiropractic, biomechanics, osteopathy, manual therapy, exercise therapy and exercise science, myotherapy, orthopaedic and neurosurgery and sports medicine.

Further details: Call for papers: [www.worldcongresslbp.com](http://www.worldcongresslbp.com); Information: [info@worldcongresslbp.com](mailto:info@worldcongresslbp.com)

### The sixth international conference on Sport, Leisure and Ergonomics

14–16 November 2007, Burton Manor, Burton, Wirral, Cheshire, UK

Further details: Congress Secretariat: Tel: 0151 231 4249; Email: [G.Atkinson@ljmu.ac.uk](mailto:G.Atkinson@ljmu.ac.uk)

### 2007 World Conference on Doping in Sport

15–17 November 2007, Madrid, Spain

Further details: Online registration: [www.wada-ama.org](http://www.wada-ama.org)